Assessing the NCEP CFS Model Bias over the Tropical Eastern Pacific Stratus Deck and its Impact on the Simulation of Climate

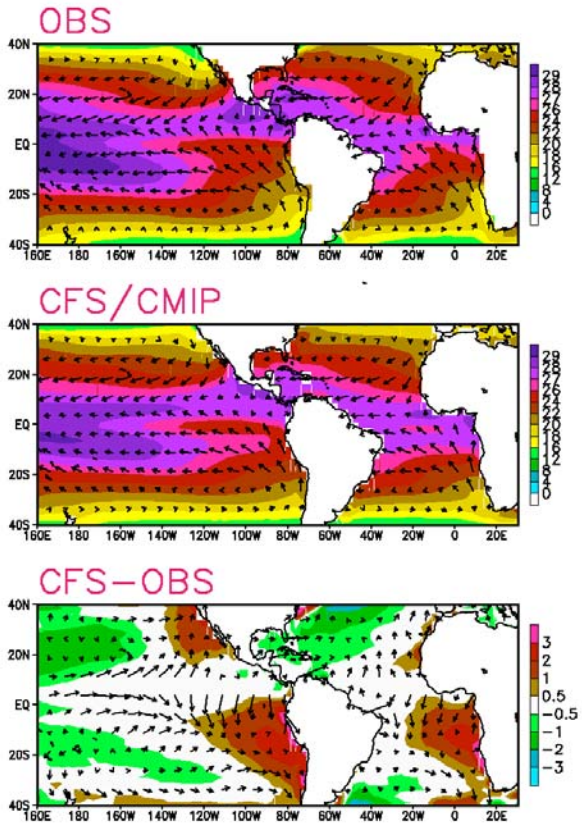

Fig. 1: *Annual mean climatology of SST (^{o}C, shaded) and surface wind (arrow) from observations (top) and CFS CMIP simulations (middle), as well as their differences (bottom). The OI SST analysis of Reynolds et al. (2002) and the QuikScatter surface wind are used as observations, respectively.*

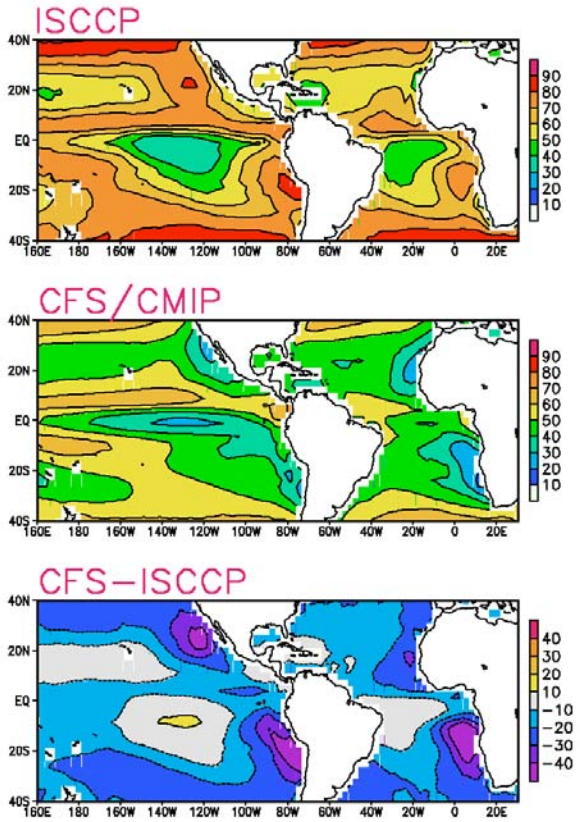

Fig.2: *Annual mean climatology of total cloud amount (%) from the ISCCP satellite observations (Rossow and Schiffer, 1991, top), CFS CMIP simulations (middle), as well as their differences (bottom).*

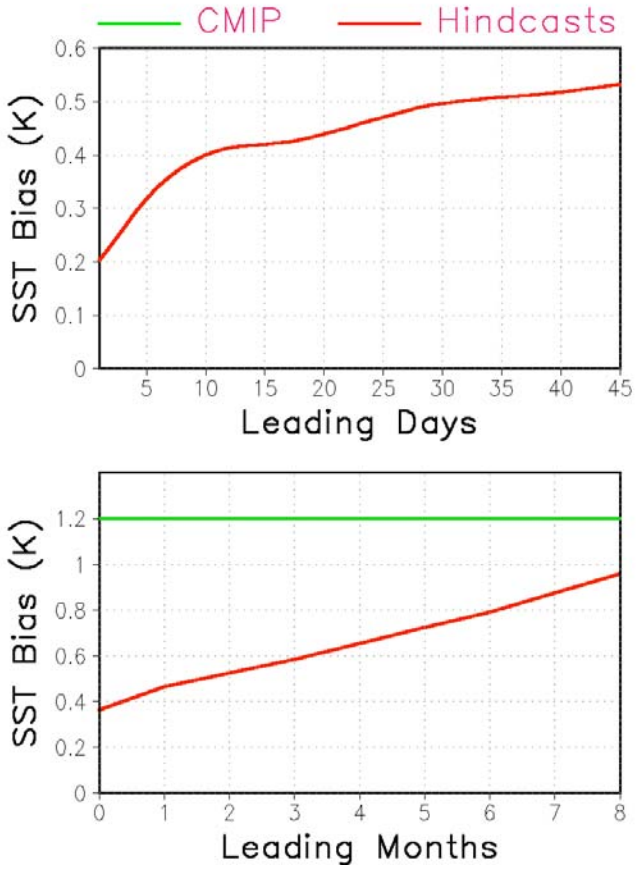

Fig.3: NCEP CFS fSST bias averaged over SE Pacific as a function of forecast leading time. Results (red) are based on daily (top) and monthly (bottom) climatology of the CFS hindcasts for a 24-year period from 1981 to 2004. SST bias from CFS CMIP simulations is also printed (blue) for comparison.

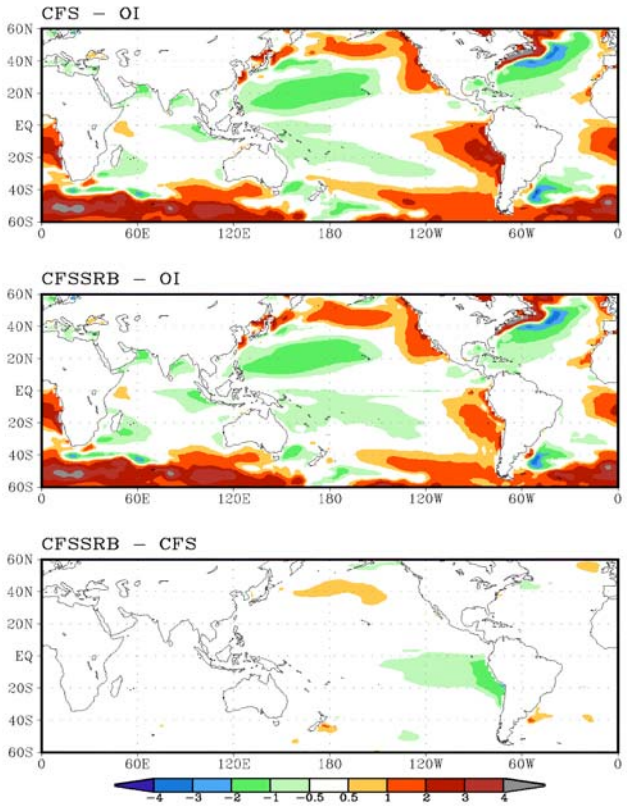

Fig.4: Annual mean SST bias in the fully coupled CFS CMIP simulations (top), CFS CMIP simulations with radiation over SE Pacific corrected (middle), and the differences between them (bottom). The bias is defined by comparison with the monthly OI SST analysis of Reynolds et al. (2002).